



***Vac-U-Flo 90 SMT Desoldering Station***  
**Operation & Maintenance Manual 5050-0497**

**1. Packing Contents (8007-0354 or 8007-0355)**

- A) VF 90 SMT Desoldering Station
- B) VF 90 SMT Desoldering Hand-piece fitted with Standard Tip.
- C) Hand-piece cubby fitted with Micro Switch for controlling air-flow
- D) Angle Bracket Kit (6800-0097-P1)
- E) Cleaning tool (6800-0037-P1)
- F) Tip Wrench (Open End Wrench (6.35mm (.25") & 7.9 mm (.31")) ) (6800-0036-P1)
- G) Flux Condenser (6800-0001-P1) NOTE VACUUM FLOW DIRECTION
- H) Silencer (6800-0050-P1)
- I) Filter Set for Hand-piece (6800-0032-P1)
- J) Felt Filters 3 Pieces (6800-0002-P1)
- K) Foam Filters 5 Pieces (6800-0002-P1)
- L) Mica Sheets 1 Piece (6800-0006-P1)
- M) O Ring Lubricant (6900-0040-P1)
- N) Adjustment Tool (6800-0054-P1)
- O) Tip Cleaning Shaft (.635mm (.025") Diameter)
- P) Air Hoses (2)
- Q) Power Cord

**2. Specification**

Power Requirements: 8007-0354 8007-0355	120 VAC, 60 Hz, 39 - 330 W 230 VAC, 50 Hz, 39 – 330 W
Weight Power Supply Hand-piece	3.8 kg (8.5 pounds) 383g (13.5 oz)
Dimensions	135mm (5.3") H x 165mm (6.5") W x 260mm (9.25") D
Temperature Range:	205°C – 425°C (400°F – 800°F)
Air Flow:	11 SLPM (22 SCFH) @ 5.5 bar (80 p.s.i.) 9 SLPM (19 SCFH) @ 4.5 bar (65 p.s.i.)
Voltage Leakage Tip to Ground	< 2mV
Tip to Ground Resistance	< 2 Ohm



### 3. Safety Information

- a. Do not contact the heater or its peripheral parts during operation.
- b. Once turned off, let the unit cool completely before contacting.
- c. When using fluxes, use fume extraction equipment or use in a well-ventilated area to minimize operator exposure to fumes. Testing

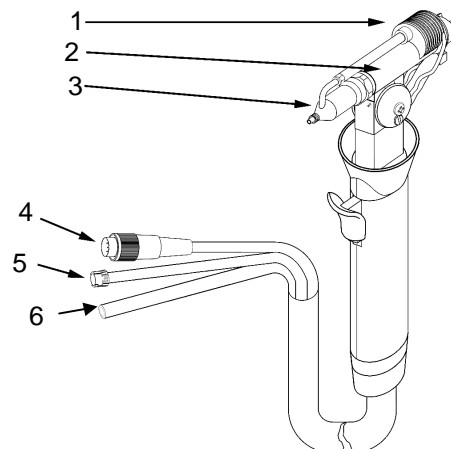
### 4. Features

Hot gas assist	Effectively pre-heats area to be desoldered, reducing thermal shock and contact time.
N2 compatible	Reduces/eliminates the need for flux and reduces bridging.
Variety of tips available	Flexibility, choose the right tip to suit your application
Stainless steel tip	Tip will not pit or corrode eliminating pad damage
Shop air powered vacuum	Quiet operation: Ideal for high volume applications
Variable vacuum control	Variable adjustment allows desired amounts of solder to be left on pads, more consistent finish.
Large capacity collection chamber	Reduces cleaning frequency and allows for large jobs to be completed quickly.
Independent temperature control for desoldering tip and hot gas.	Easily adapts to a wide variety of jobs

### 5. Set-Up

#### A. Hand-piece

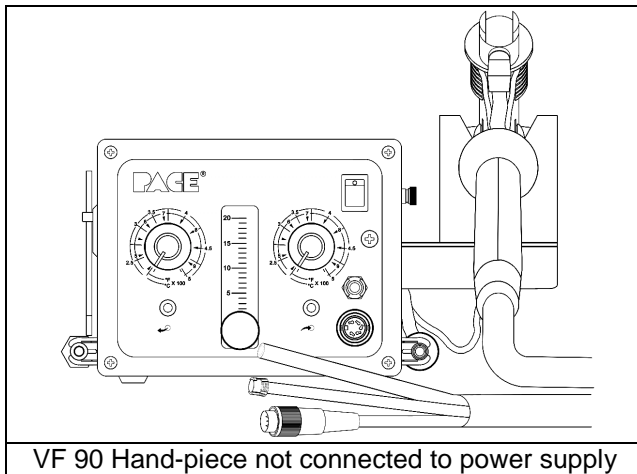
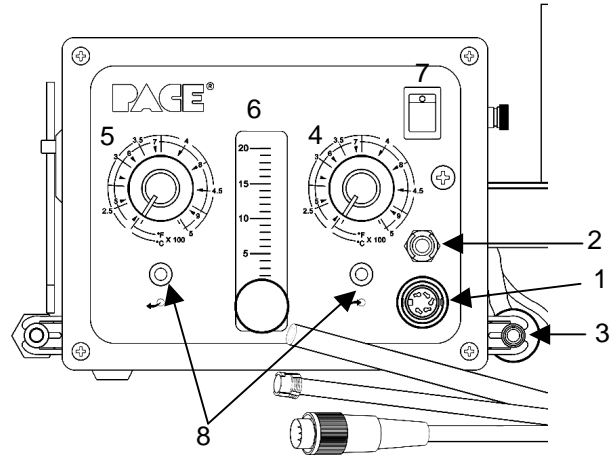
1. Gas Heater
2. Desoldering Head Housing
3. Desoldering Tip
4. 24 Volt input, turn clockwise to engage
5. Gas connector, turn clockwise to engage
6. Vacuum Line, connect to condenser



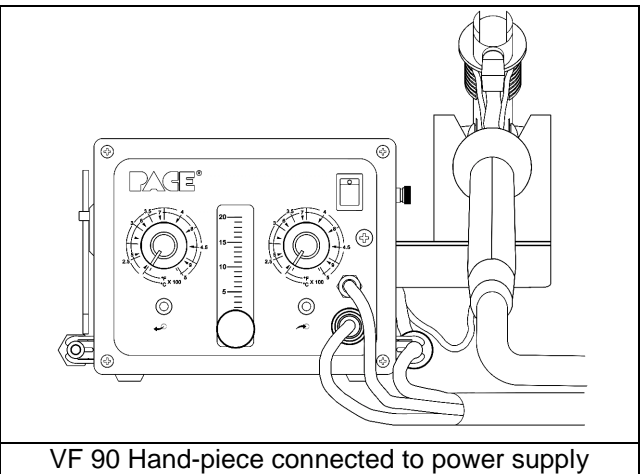
B. Power Supply (Front)

**Hand Tool Connectors must be turned clockwise to engage.**

1. 24 volt hand-piece connection
2. Air flow connection
3. Condenser and vacuum hose connection
4. Tip temp adjust
5. Hot gas temp adjust
6. Airflow regulator
7. Power switch
8. Temperature indicating LEDs



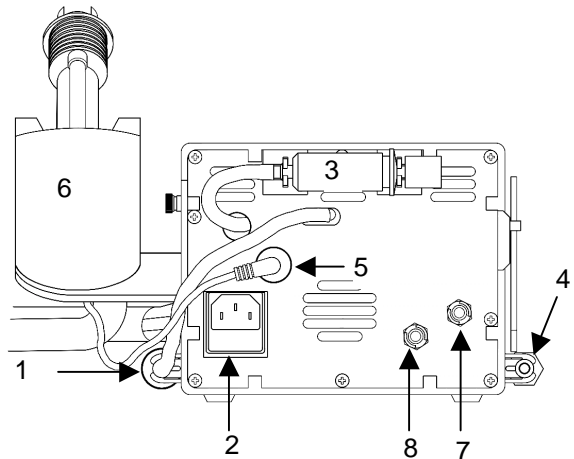
VF 90 Hand-piece not connected to power supply



VF 90 Hand-piece connected to power supply

C. Power Supply (Back)

1. Condenser (Back)
2. Power input
3. Silencer
4. Cleaning tool
5. Tool stand micro switch connection
6. Hand-piece cubby
7. Airflow supply
8. Vacuum supply

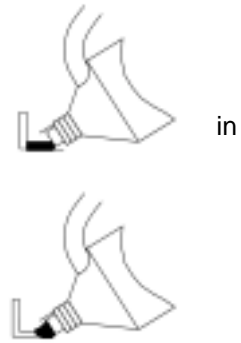


(Vacuum) Ideal air pressure input:	Ideal Gas Input (Air Flow) (color-coded sleeve):
60 to 90 psi	13 psi max.
413.7 – 620.5 KPA	5 SCFH
4.1 – 6.2 bar	2.4 L/min

## 6. Operation

1. Turn on power switch. The heater indicator (green LEDs) will light up. Hot Gas & Vacuum will activate if tool is removed from the holder.

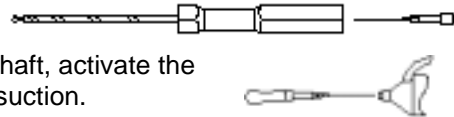
**Note:** Hand-piece should always be placed in holder when not use. Hot gas flow will stop when tool is placed in the holder



2. Adjust temperature settings for hot gas and tip to the desired setting 325°C – 375°C (600°F - 700°F). The heater indicator will remain on until the appropriate heater reaches the set temperature. A blinking heater indicator means set temperature has been achieved and is being maintained.
3. Adjust airflow regulator to desired setting.

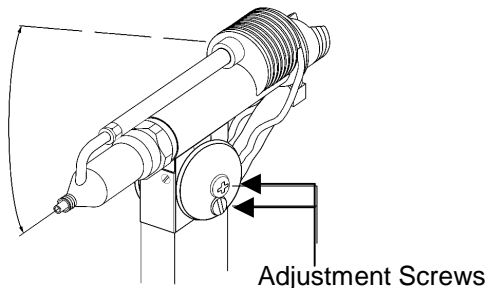
**CAUTION:** If airflow is too high, molten solder may be blown off of the PCB

4. Place tip close to working area.
5. When solder melts, press trigger to remove solder.
6. If the tip clogs, use the cleaning shaft from the cleaning tool by unscrewing it as shown below.
7. Use the cleaning shaft to remove the obstruction. While using the cleaning shaft, activate the vacuum pulses rather than continuous suction.



## 7. Hand-piece Head Adjustment

- A. Adjustment of angular orientation should be done while the tool is cool.



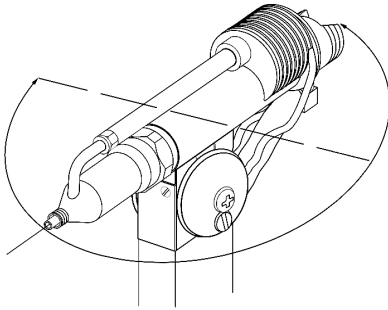
1. To tilt the head assembly, loosen (2) adjustment screws.
2. Tilt the head assembly to desired position
3. Retighten screws.

- B. Head rotation should be done while the tool is cool.

1. While handpiece is in the cubby, push handle down and twist.

2. Twist until head locks into 1 of its 4 positions. Twisting counter-clockwise will permit a 180° turn. Twisting clockwise will permit a 90° turn.

**Note:** The head assembly does not make a full 360° turn.



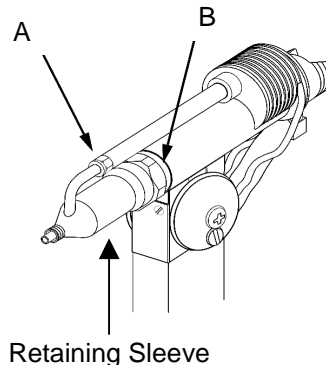
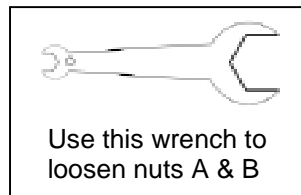
## 8 Tip/Accessory Replacement

It is recommended for the operator to remove and inspect the tip daily. Replace the tip if there is any sign of wear. Doing this will also prevent the tip from seizing onto the heater.

**CAUTION: ONLY REMOVE THE TIP WHEN THE HAND-PIECE IS COOL**

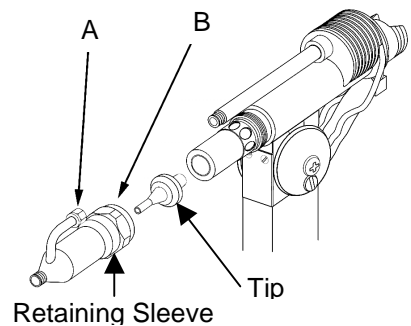
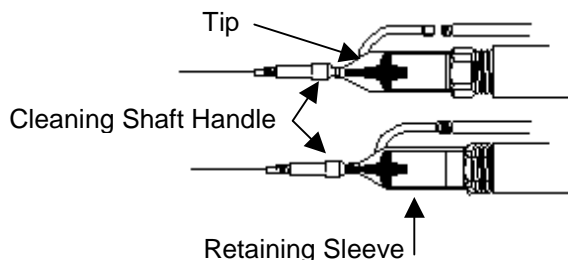
### A Removing the Tip

4. To remove the tip, loosen air flow tube nut (A), then the retaining sleeve nut (B).
5. Remove retaining sleeve.
6. Remove tip.








### B. Installing a new Tip

1. Insert tip into heater
2. Replace retaining sleeve over tip/heater
3. Check the alignment of retaining sleeve by inserting the end of the cleaning shaft handle inside the tip
4. Tighten the retaining sleeve nut (B).
5. Tighten air flow tube nut (A)



### Optional Tips

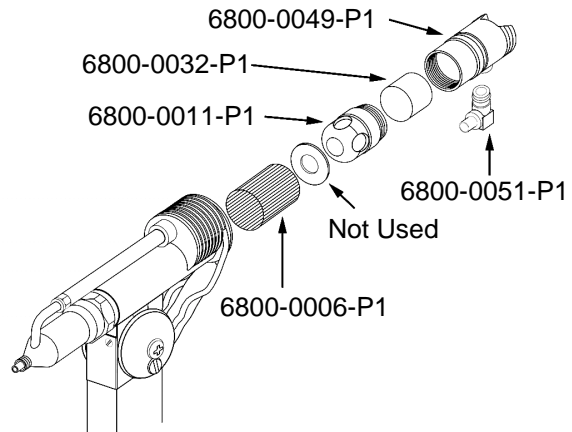
	Hole Diameter	Length	Part Number
	2.3mm (.09")	14mm (.55")	Focus Nozzle 6800-0028-P1
	1.3mm (.05")	10.9mm (.43")	Standard Nozzle 6800-0027-P1
	.5mm (.02")	20.3 mm (.8")	Round Needle Tip P/N 6800-0029-P1
	.3mm (.01")	16mm (.63")	Small Oval Needle 6800-0030-P1
	.5mm (.02")	20mm (.80")	Medium Oval Needle 6800-0031-P1

## 9. Cleaning & Maintenance

Proper maintenance and regular cleaning are required to keep your VF 90 operating properly. Please refer to the replacement parts table in Section 10 of this manual when ordering replacement parts.

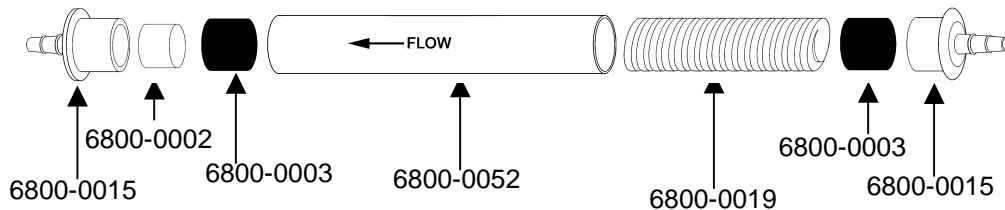
A. The following items should be inspected and cleaned or replaced on a regular basis:

- Replace Felt Filter (6800-0032)
- Clean Solder Cone (6800-0011)
- Replace Mica Sheet (6800-0006).
- Check O Rings on End Cap Assembly and Elbow Connector. Part numbers 6800-0053 for End Cap and 6800-0051 for Elbow Connector.
- Replace worn-out Tip.



B. Flux Condenser Maintenance (6800-0001)

1. Replace felt filter (6800-0002) and foam filters (8000-0003)
2. Clean barrel housing (6800-0052) and condenser (6800-0019) with alcohol.
3. Tip wrench can be used to remove 6800-0015 filter cap.

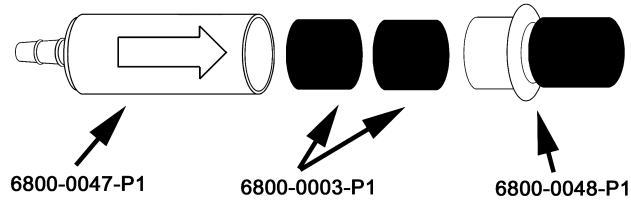


4. If flux gets in the venturi, disconnect the flux condenser and the silencer. Flush the venturi with alcohol. You may need to pump the alcohol through the venturi.

**CAUTION: Disconnect power before opening back panel to access venturi!**

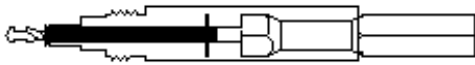



### C. Silencer Maintenance

1. Disconnect air hose.
2. Open plastic housing (6800-0047).
3. Replace foam filters (6800-0002).
4. Close plastic housing.
5. Reattach air hose and install on back of power supply.



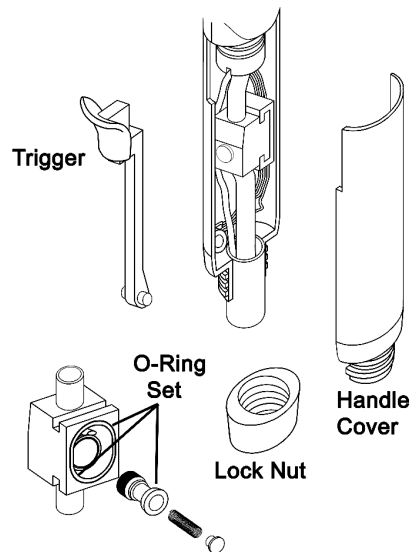
### D. Cleaning the desoldering collection chamber and replacing the heater tube and silicon washer in collection chamber

***Always dispose of old solder in accordance with local environmental regulations.***

	To clean the collection chamber, remove the end cap and dump out old solder. Using the cleaning tool, remove the mica sheet and clean. Replace if worn.
	To clean the solder pathway, first remove the retaining sleeve and Tip. Next, insert the cleaning tool all the way into the opening to remove any obstruction
	To remove the heater tube, push the cleaning tool in all the way, the heater tube will come out of the front end and can be removed.
	Remove the silicon washer using the hook on the cleaning tool.
	Replace the heater tube, flanged end out. Insert new silicon washer into chamber. Using the handle of the cleaning tool, with the tip cleaner removed, press the silicon washer in to place.

E. O-Rings Replacement inside valve assembly

1. Unscrew lock nut at the end of the tool handle.
2. Remove handle cover.
3. Slide out valve assembly while placing your finger over the spring seat. **BE CAREFULL NOT TO LET THE SPRING SEAT SHOOT OUT FROM THE HOUSING.**
4. Clean all parts with alcohol only.
5. Replace the O-Ring Set, set of 3 (6800-0007).
6. Lubricate new O-Rings with 6800-0040 O-Ring lubricant.
7. Make sure wires and hoses are not pinched or kinked.
8. Reassemble hand-piece.





**10. Major Replacement Parts**

<b>Part Name</b>	<b>Part Number</b>
Felt Filter (Set of 10)	6800-0002-P1
Foam Filter (Set of 10)	6800-0003-P1
End Cap Assembly (Standard)	6800-0004-P1
High Performance Filter Assembly	6800-0005-P1
Mica-Sheets (set of 12)	6800-0006-P1
O-Ring set of Valve Assembly	6800-0007-P1
O-Ring for Heater Bushing Eend Cap	6800-0008-P1
Retaining Sleeve	6800-0009-P1
Solder Cone	6800-0011-P1
Heating Element for Tip Heater	6800-0012-P1
Poppet and o-ring	6800-0013-P1
Spring	6800-0014-P1
End Cap for Filter	6800-0015-P1
Valve Assembly	6800-0016-P1
Transformer	6800-0017-P1
Flux Condenser for cooling fan	6800-0019-P1
Heating Element for Hot Gas	6800-0020-P1
Circuit Board for Cooling Fan	6800-0021-P1
Soldenoid Valve	6800-0022-P1
Fan Assembly	6800-0023-P1
Circuit Board for Left (hot-gas) Side	6800-0024-P1
Circuit Board for Right (tip) Side	6800-0025-P1
Handpiece Tool (VF-90)	6800-0026-P1
Standard Tip	6800-0027-P1
Focus Nozzle	6800-0028-P1
Long Reach Needle Nozzle	6800-0029-P1
Small Oval Nozzle	6800-0030-P1

<b>Part Name</b>	<b>Part Number</b>
Medium Oval Nozzle	6800-0031-P1
Filter Set for handtool	6800-0032-P1
Vacuum Generator	6800-0033-P1
Fuse Domestic, 3.15A Fast Acting	6800-0034-P1
Fuse Export, 1.6A Fast Acting	6800-0035-P1
Tip Wrench	6800-0036-P1
Cleaning Tool	6800-0037-P1
Silicone Washer	6800-0038-P1
O-Ring Lube	6800-0040-P1
Hot Tube	6800-0041-P1
Meter	6800-0042-P1
Thermocouple 1	6800-0043-P1
Thermocouple 2	6800-0044-P1
Thermoprobe 1	6800-0045-P1
Thermoprobe 2	6800-0046-P1
Plastic Housing	6800-0047-P1
Foam Cylinder	6800-0048-P1
End Cap Assembly	6800-0049-P1
Silencer	6800-0050-P1
O-Ring for Elbow Connector Cap	6800-0051-P1
Barrel Filter Housing	6800-0052-P1
Adjustment Tool	6800-0054-P1
Wrench	6800-0056-P1
Tip Cleaning Shaft	6800-0057-P1
Air Hoses	6800-0058-P1
End Cap O-Ring	6800-0059-P1

## 11. **Compliance**

PACE Incorporated retains the right to make changes to specifications contained herein at any time, without notice.

PACE products meet or exceed all applicable military and civilian EOS/ESD, temperature stability and other specifications, including MIL-Std-2000, ANSI/J-Std-001, and IPC-A-610.

Complies with MIL-S-45743E, MIL-STD-2000, DOD-STD-2000-1B, WS6536E and ESD SPEC, DOD-STD-1686, DOD-HDBK-263

## 12. **Service**

For any questions regarding this Operation & Maintenance Manual, contact your local authorized PACE distributor or contact PACE directly at the appropriate address listed below.

Please contact PACE or your Local Representative for service and repair.



[www.paceworldwide.com](http://www.paceworldwide.com)

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